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ABSTRACT

The institutional programmatic and workload factors that have influential effects on the costs of administering the student financial aid (SFA) service were studied, based on a survey of 51 public universities. Thirty-two of the sample were chosen due to their similarities with the University of Florida, and the remaining were members of the Southern University Group of 25, a data sharing consortium. Only 21 of the returned questionnaires had sufficient data to be included in the analysis. Findings generally support the hypotheses that the expenditure and staffing levels of the SFA service can be empirically estimated by using various measures of workload. Both workload factors and staffing requirements appear to be closely related to the level of SFA expenditures. In addition, workload factors are also influential in explaining staffing levels, but this relationship is not as strong as the relationship between workload and expenditures. Variables that were examined in relationship to expenditures include: the number of headcount students, the number of individual programs supported by the SFA office, the university structure, the number of awards granted to students, the average number of revisions in aid awards, SFA staff-student contacts, and time involved in the validation of Pell application forms. Two conclusions that can be drawn from the findings are that there are fairly consistent relationships among the noted variables across the universities, and that expenditures can be expected to increase proportionately with increases in workload variables. Empirical models of expenditure and staffing requirements were developed. These models and a sample questionnaire are appended. (SW)

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COLLEGE AND UNIVERSITY COST/PRODUCTIVITY MODELS FOR ADMINISTRATIVE AREAS:
CASE STUDY: STUDENT FINANCIAL AID ADMINISTRATION

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ABSTRACT

A recent search of literature in institutional research has shown that little or no work has been done to identify, compare or predict what college and university administrative costs are or should be. This study was undertaken to determine what could be done to identify and quantify such relationships in one administrative area.

The intent of this study was to identify the institutional programatic and workload factors that have influential effects on the costs of administering the Student Financial Aid service. A theoretical and quantifiable understanding of these relationships permits prediction of funding requirements and inter-institutional comparisons to be made.

It was expected that student financial aid administrative expenditures and staff size would vary directly with such workload factors as the level of enrollment and the number of financial aid awards granted, etc. The relationship between institutional characteristics and workload factors on staffing requirements was also examined. The results of the study are generalized models of expenditure and staffing requirements as well as descriptive statistics on the Student Financial Aid service.

This is but one of several administrative areas of colleges and universities which can and should be examined to encourage the effective use of resources in higher education.

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I. Overview

The history of Institutional Research has been conducted predominantly in the primary academic programs of colleges and universities. That is, IR research efforts have been related to a wide variety of studies and analyses in the Instruction and Research areas (ie, enrollment studies, faculty salary comparisons, teaching workload analyses, developing the ICLM, etc.). Little has been done to identify costs or productivity relationships whether actual or normative in the support program areas such as Student Support or Institutional Support. The Physical Plant Operations have, however, received some attention through application of certain industrial workload models.

While the Institutional Support program areas do not command the major fraction of the institution's budget, research in these areas is nonetheless needed to insure that organizational managers are using all of their resources wisely. With increasing operating costs and often decreasing real non-salary dollars and with the prospect of declining enrollments and therefore declining public funding, it is incumbent on competent administrators to insure that they are getting the most for their administrative dollar. To this end, additional empirical cost and productivity models need to be developed, analyzed, and used where possible. Such models can be used for comparisons, budget allocations, as well as budget justification.

II. Student Financial Aid: Problem History

In the late 1970's, the number of students receiving some form of financial assistance through their college or university increased markedly. From 1975-76 through 1980-81, the number of students

receiving aid at the University of Florida increased by 66.5% while the actual aid dollars disbursed rose by 128.1% to exceed \$46,000,000 (in 1980-81). However, during this same period, the administrative funds, particularly Federal funds, for screening and delivery of aid increased at only a very small rate. A major component of this large increase in workload was brought about by enactment of the Middle Income Assistance Act in 1979. The symptoms of this problem were repeatedly brought to the University budget officers by administrators of the Student Financial Aid Office. They expressed solutions which required an expanded State budget, more full-time personnel, building renovations as well as the need for a stand-alone computer. At the same time, other key officers believed that these demands for increased funding were unjustified and maybe unjustifiable.

To put this outcry for additional resources into perspective, the Office of Planning and Analysis undertook this study.

The Office of Planning and Analysis staff decided to construct several empirical models using data from comparable state-supported universities. These models were to be based on common workload measures and other institutional factors. This decision created secondary problems of obtaining useful and accurate data and of defining workload and other common factors which would be collected and studied. A survey of recent literature revealed that neither data of this type were known to exist nor were empirical studies concerning the financing of Student Financial Aid Administration. It appeared that the most efficient method of obtaining the needed information was to design and distribute

a survey instrument to a selected sample of universities throughout the United States and to use the resulting data, if possible, to formulate the desired empirical models.

III. Methodology

A survey instrument consisting of 19 basic questions was designed and distributed to 51 public universities located in all sections of the United States. The 51 universities were chosen for one of two reasons. Thirty-two of the universities were chosen due to their similarities with the University of Florida. Characteristics such as major source of funding, number of accreditations and size of enrollment were some of the factors which were used in the selection of these universities. The remaining universities were members of the Southern University Group of 25, a data sharing consortium of which the University of Florida is a member.

In order for the statistics to be most useful, it was determined that the sampled universities must share a number of common traits with the University of Florida. The University of Florida is a state-funded, land-grant, Carnegie Type I research university with approximately 33,000 students on the main campus. These details, along with other distinguishing characteristics were compared with accreditation and statistical characteristics of other universities listed in the Education Directory, Colleges and Universities, 1977-78 (NCES). One point was assigned to each university for each similar accreditation or statistic with twelve points as the maximum rating. All universities and colleges scoring less than 4.5 points were excluded from the survey.

Further details about the rating system and a complete listing of the universities included in the sample are found in Appendix A. The survey instrument, which can be found in Appendix B, was divided into four sections. The first section provided background information such as university enrollments and fee structures. Questions concerning the functional distribution of staff and expenses and staff-student contacts were included in the second section. The third section provided data on the number and characteristics of the financial aid awards provided. Level of service measures, both qualitative and quantitative, were included in the fourth and last section. This last section was comprised of such measures as administrative expenditures, number of applicants, number of recipients and dollar disbursements by student financial aid category.

The level of detail designed into the questionnaire permitted a distinction between staffing levels and expenditure levels of both the Student Financial Aid (SFA) office itself and the staffing levels and expenditure levels of all departments, including the SFA office, which contribute to the SFA function (ie, Comptroller, Registrar, and Administrative Computing Services). In addition, staff was disaggregated into salaried staff and student assistants.

Throughout this paper, references made to the Student Financial Aid office include only costs, workload and staff associated with the SFA office. References made to the SFA activity include the costs, workload and staff associated with the SFA office along with all other offices

which directly contribute to or support Student Financial Aid functions (ie, Comptroller, Registrar, and Administrative Computing Services).

One of the first decisions concerning the questionnaire format was to limit its length to two pages while retaining only the most pertinent questions. The questions included had to be relevant and reasonable in order to encourage a high response rate.

On the University of Florida Campus, Student Financial Aid functions are spread among several offices; 1) Student Financial Aid, 2) Comptroller, 3) Registrar, and 4) Administrative Computing Services. The inclusion of items pertinent to each of these areas, as well as considerable input from each of these offices, was deemed crucial. This not only resulted in additional questions from which to choose, but also increased the likelihood that individuals in each of these offices would find value in the information gathered, thus reducing potential internal opposition to this study.

As with any questionnaire, a number of revisions were necessary before a final product was produced (see Appendix B for final questionnaire). For distribution, this questionnaire was printed on two pages of bright yellow legal sized paper, which had the added advantage of being highly visible.

This survey was distributed in a package containing a cover letter with an explanation of the intended uses of these results (Appendix C), the survey instrument itself (Appendix B), and a list of sampled universities

(Appendix A). The survey packages were mailed to two individuals at each university, one in Institutional Research and one in the Student Financial Aid office. This was done to increase the probability of a useful response and to encourage a combined effort in completing the questionnaire.

A tracking and follow-up system was designed with a first telephone call to recipients of the survey one week after mailing, a follow-up letter two weeks after mailing, and a second telephone call four weeks after mailing. After the sixth week, follow-up procedures were terminated and letters of receipt were sent to each respondent indicating a projected date for receiving results of the study. Of the 51 original universities surveyed, responses were received from 42 (an 82.5% response rate).

Correlation and regression analysis were the primary techniques that were used to analyze the data. The SAS programs CORR, GLM, STEPWISE and PLOT were used for this purpose. Descriptive statistics were generated by the program MEANS.

IV. Descriptive Statistics

In order to ensure that all of the final statistics were based on the same observations, any questionnaire which did not contain valid data for each of the variables included in the final set of statistical models was deleted from the analysis. This requirement resulted in the inclusion of only 50% of the returned questionnaires due to a large number of missing values. However, Chi-Square and t-tests indicated that the variables from the 21 observations used in the

analysis had distributions and means which were not significantly different from the distributions and means of the remaining set of questionnaires. Thus, the estimated coefficients of the models and descriptive statistics could be assumed to represent similar statistics obtained from the 42 partially completed questionnaires.

Headcount enrollment in the 21 universities for which the most complete and useful data was received ranges from 11,374 to 54,600 (see Table I). Despite this rather large range, enrollment appears to be relatively homogeneous as the Standard Deviation of 10,513 is less than half the Mean of 25,325. The resulting Coefficient of Variation (Standard Deviation/Mean) is 41.51 percent.

Expenditures in both expenditure groups (ie, SFA office alone and all offices performing SFA functions) also cover a wide range, from \$80,000 to \$1,157,387 for the SFA office and \$191,345 to \$1,848,987 for total Student Financial Aid functions. However, as Table I indicates, the variability of expenditures is considerably higher (as illustrated by the Coefficient of Variation) than the variability in enrollments. The E & G budget values for the universities (obtained from 1978-79 HEGIS data) are more variable than the enrollment data but less variable than the expenditures. The minimum value is \$34,773,388, the maximum is \$266,094,080, and the Coefficient of Variation is 52.34 percent. The Mean E & G budget for 1978-79 is \$135,036,704.

The 21 universities differ considerably in the number of Student Financial Aid programs that are offered. The range extends from

8 to 92 programs. One university indicated that it had 450 programs; however, this observation was deleted. The average number of programs is 23, and the Coefficient of Variation is 77.1 percent.

On the average, there is one FTE salaried employee in the Student Financial Aid office for every one million dollars of aid disbursements, and there are two FTE salaried employees in all departments that provide SFA services per million dollars of aid awarded. The Coefficients of Variation are 47.61 percent and 46.95 percent respectively. The average SFA administration cost per one million dollars of the E & G budget is \$302 for the SFA office, with a Coefficient of Variation of 43.86 percent, and \$491 for all departments providing SFA services, with a Coefficient of Variation of 50.15 percent.

The average SFA disbursement per enrolled student is \$970; it is \$615 per applicant* and \$1,137 per award recipient. The minimum disbursement per recipient is \$809, and the maximum is \$1,509. The Coefficient of Variation of 16.62 percent, which indicates that there is relatively little dispersion in this variable. This implies that universities provide quite similar amounts of aid to award recipients.

With a rating scale ranging from 1 to 5 (unsatisfactory, below satisfactory, satisfactory, above satisfactory, and excellent) and including all respondents, eighteen universities were self rated as below satisfactory, sixteen as satisfactory, five as above satisfactory, and two

*A student can apply for multiple types of aid; therefore, one student can generate more than one application for aid.

as excellent with respect to their SFA level of service based on their funding level. Only one university rated itself as providing unsatisfactory service due to the level of funding available. The levels of funding for SFA services, as reported in the survey, resulted in an unsatisfactory service level in 40% of the universities, a satisfactory level of service in 40%, and an above satisfactory to excellent level of service in 20% of the universities.

V. Development of Linear Regression Models

As noted in the Descriptive Statistics section, only 21 of the returned questionnaires had a sufficient number of responses to the most statistically meaningful data to be included in correlation and regression analysis. The development of regression models therefore includes only the 21 selected universities.

The two major hypotheses being tested in this study are as follows:

- 1) The number of SFA office and activity employees, both FTE salaried and student assistants, is directly related to a variety of workload measures;
- 2) The total expenditures of the SFA office and activity are primarily and directly related to the number of employees, while other variables may also be significant.

Construction of the regression models was preceded by a study of the correlation matrix of the major variables. Table II includes the highlights of this analysis, as described in the following paragraphs.

For purposes of this study, workload variables are considered to be either scale variables or workload variables. Scale variables tend to define the upper and lower limits of the workload required of the SFA function in a given university, while workload variables are measures of actual SFA product.

The number of headcount students was the first scale variable. This generally defines the upper limit of the number of individuals who are to be served by the SFA office and activity.

The number of individual programs which are supported by the SFA office is the second scale variable and was expected to be directly related to expenditures. To work effectively with a large number of SFA programs, both the student's obligations and the administrative requirements, including application deadlines of all the programs offered, must be properly understood by the staff, although each employee may not be concerned with all of the programs. The resulting correlations did not support this hypothesis in either direction or magnitude.

The third and final scale variable was considered to be the university fee structure. It was expected that SFA costs would be lower under a block fee tuition payment system (one fee for a range of credit hours taken) than under a tuition system in which payment is made by the credit hour. It was assumed that SFA services would be simpler to administer under the block fee system, since use of the block fee

payment would reduce the number of times that the size of awards would need to be recalculated, based on revisions in student load.

The most readily apparent workload measure is the total number of awards granted to students. Although this variable is itself dependent on other variables such as the size of enrollment, the number of programs supported by the SFA office, and the average income of the parents of the students (a factor which affects award availability), the total number of awards granted is a straightforward, positive measure of staff workload.

The average number of revisions in aid awards was expected to have a significant positive effect on SFA expenditures, since the revision process consumes additional human and other resources such as computer time.

SFA staff-student contacts utilize blocks of time which can otherwise be used by SFA employees to perform other administrative or clerical duties. Such contacts could therefore increase the need for SFA staff. The total number of meetings with students is an important aspect of the SFA service and was expected to be a workload measure that also has a strong positive relationship to SFA expenditures.

The validation of BEOG (Pell) application forms is another specific task which was expected to positively contribute to SFA expenditures.

Data displayed in Table II confirms the hypothesized relationships between staff and expenditures (for both the SFA activity and the SFA office) between both FTE and headcount enrollment and expenditures (and staff), between total staff-student contacts and expenditures (and staff), and between the total number of awards granted and expenditure (and staff). The table also indicates that the total number of individual programs offered has no correlation with either expenditure or staff. The same is true for the total number of BEOG (Pell) validations, and the total number of revisions. The hypothesized relationship between fee structure and expenditures could not be correctly ascertained using correlation analysis because the former is a nominal scale variable. However, dummy variable regression analysis indicated that there was no correlation between these two variables. The total number of BEOG (Pell) applications received was found to be statistically correlated with both expenditures and staff.

The support given to the original hypotheses by the correlation analysis indicated that statistical models could be constructed to express the following four relationships mathematically. First, the relationship between measures of workload and the number of staff utilized could be estimated. This model can be used to estimate the possible effects of events such as an increase in BEOG (Pell) applicants on staffing requirements. Second, the effects on expenditures of variability in staffing levels could be estimated to assess the influence of changes in staffing requirements on total expenditure. These two models could then be combined into a third, single simultaneous model that would first be used to estimate staffing levels based on

workload and then used to estimate expenditure levels based on the expected value of staff. This model could be used to indicate both the intermediate and final effects of workload increases. Finally, a fourth model could be used to estimate expenditures directly, based on the values of a number of workload variables. Results of each of these four models are shown in Table III-A through Table III-D.

In all of the models, the R-Square is 0.71 or greater; however, those models which estimate expenditure levels have a higher R-Square than the models constructed to estimate staffing levels. Removal of the FTE enrollment variable (which was not statistically significant in the staffing models) from the expenditure models only reduced the R-Square from 0.88 to 0.84 for the SFA office model, and from 0.90 to 0.84 for the SFA activity model.

It is possible that workload variables may not be as useful in explaining the SFA staffing requirements as they are in explaining SFA expenditures. A possible explanation for this is that total expenditures may vary closely with workload while a particular component of that expenditure may not. For example, consider two universities with equal workloads. The total expenditure for student financial aid may be approximately equal in these universities, although in one 85% of the expenditure may be attributable to staff, while in the other only 80% of the expenditure may be a result of the staff input. This suggests that some trade-off does exist between human and non-human inputs to the SFA process among the sampled universities, although the range of this trade-off may not be very large.

Examination of the BETA coefficients in the expenditure models shown in Table III-D indicates that the number of BEOG (Pell) applicants has a greater effect on SFA office expenditure than either the total number of staff-student contacts or FTE enrollment, while staff-student contacts has a slightly greater effect than the other two variables on the expenditure of the SFA activity. Enrollment has a slightly more pronounced influence on the activity than on the office.

VI. Conclusions and Observations

This study generally supports the original hypotheses that the expenditure and staffing levels of the SFA service can be empirically estimated by using various measures of workload. One conclusion that can be drawn from this is that there are fairly consistent relationships among the noted variables across the universities included in this study. Expenditure and staffing comparisons between a single university and the sample of universities (if the values for these variables are within the range considered in the formulation of the models) are possible using the regression models included in Table III-A through Table III-D. Another important conclusion of this study is that expenditures can be expected to increase proportionately with increases in workload variables. The following observations are also particularly remarkable.

Both workload factors and staffing requirements appear to be closely related to the level of SFA expenditures. In addition, workload factors are also influential in explaining staffing levels, but this relationship is not as strong as the relationship between workload

and expenditures. This may be due to the fact that total expenditures include both the costs of human and non-human inputs, while the level of staff consists, by definition, of human input only. The SFA office and activity can utilize different levels of human and non-human inputs to achieve the same amount of output (workload) for a given expenditure level. To the extent that the range of this trade-off increases among sampled universities, the relationship between staff and workload may be weakened. On the other hand, although the components of total expenditure may vary (e.g., human and non-human inputs), the relationship between the total expenditure and workload may be strong.

It is possible, however, that due to changes in eligibility requirements, SFA counselors may need to devote more time to each applicant and meet with more applicants for the sole purpose of finding appropriate sources of student aid, thus increasing the workload. Restrictive aid requirements may not result in fewer applicants or less workload, although the restrictions may indeed result in fewer recipients. Thus, tighter eligibility rules may result in increased SFA expenditures. In addition, changed rules may introduce a greater number of errors into the delivery of the service and thus lead to an increase in the number of award revisions and staff-student contacts, increasing workload and expenditures further. If legislative action does produce these types of results, SFA expenditures may increase by a greater amount than might otherwise be anticipated.

VII. Specific Funding Recommendations for SFA Office at the University of Florida.

On the basis of information contained in the descriptive statistics as well as on several of the linear regression models, it was determined that the Student Financial Aid Office was expending slightly more per year from all sources of funds than were the 21 sampled universities. However, the University of Florida's SFA Office reported a level of expenditure which included approximately \$67,000 of funds temporarily allocated on a one-shot basis. This included a one-time spend-down of Federal administration grant reserves.

The Office of Planning and Analysis recommended that the \$67,000 be permanently allocated to the SFA Office from General funds. Furthermore, on the basis of the staffing models, the office of Student Financial Aid was allocated approximately five full-time salaried staff employees fewer than the predicted sample average. This had, however, been off-set in SFA Office budget with funds to hire temporary, part-time and student help. The Office of Planning and Analysis included the request for five additional permanent staff positions in the 1982-83 Legislative Request Budget.

The models revealed, however, that the over-all University of Florida Student Financial Aid activity had been allocated slightly more dollars and more staff positions than was estimated by the SFA activity expenditure and staff models. This information was made available to various top University administrators for future deliberation and possible action.

VIII. Suggestions for Future Research

As this study has shown, the support program areas of colleges and universities can be statistically analyzed and important comparisons can be made. Furthermore, the Student Financial Aid area represents only one among many administrative areas in need of this type of analysis. The following specific comments are relevant to future administrative research in the SFA area as well as other support program areas.

Examinations of the raw data indicated that the definitions which were used by the responding universities for some data items, most notably the E & G budget and data processing costs, were not consistent. This resulted in the exclusion of some data from the analysis.

While accurate E & G budget data was obtained from HEGIS tapes, useable data processing cost information was not. Time limitations did not permit the respondents to be contacted to obtain better data concerning these measures. It should be pointed out that while the inclusion of better data definitions with the survey forms may have alleviated some data problems, major organizational and accounting differences among universities may have prevented some forms of data from being comparable for all universities.

Finally, the inclusion of questions in the survey on staff salaries would have allowed the examination of expenditures excluding salaries. Two possible results of such an analysis would be, a) the efficiency

of staff (e.g., non-salary expenditure per recipient of student financial aid) and, b) a more accurate assessment of the relationship between non-staff expenditures and other workload measures.

APPENDIX A

Participating Institutions and Coding Strategies

I. Participating Institutions

Because of similarities with the University of Florida, the following public universities were chosen to participate in this study:

(Not in any particular order)

University of Washington (Seattle)	University of Arizona
University of Illinois	University of Kentucky
Southern Illinois University	Florida State University
University of Hawaii	University of Minnesota
Ohio State University	University of Michigan
University of California (UCLA)	University of Houston
University of Oklahoma	University of South Carolina
Purdue University	University of Georgia
University of Utah	Pennsylvania State University
University of Wisconsin (Madison)	University of Pittsburgh
University of Missouri	University of Iowa
University of Maryland	University of Nebraska
Temple University	Louisiana State University
Michigan State University	University of Texas
University of Colorado	University of Tennessee
Arizona State University	University of Kansas
University of Connecticut	University of California, Berkeley
Indiana University	

The following public universities were included due to membership in the SUG-25 (some universities are duplicated in both groups):

(Not in any particular order)

Mississippi State University	North Carolina State University
University of North Carolina	University of Alabama
Texas A&M University	University of Houston
University of Mississippi	University of Virginia
University of Kentucky	Virginia Polytechnic Institute & State University
University of South Carolina	Georgia State University
University of Southern Mississippi	University of Georgia
University of Alabama, Birmingham	West Virginia University
Texas Tech University	Louisiana State University
University of Arkansas	University of Texas
University of Maryland	Florida State University
University of Tennessee	University of Oklahoma
Oklahoma State University	

Data was also used in the analyses from the host university:

University of Florida

APPENDIX A

II. Coding Strategies

Based on data reported in the Education Directory, Colleges & Universities 1978-79 (NCES), each college and university report was reviewed to determine that institution's similarity to the University of Florida based on size of the student body, calendar system, source of control, and various accreditations. Each college or university was given one point for meeting the following criteria:

1. Enrollment over 20,000
2. Source of Control: State or State-Related
3. Calendar System: Quarter
4. Accreditations:

(One point each)

Medicine
Law
Engineering
Architecture
Dentistry
Pharmacy
Nursing
Veterinary Sciences
Agriculture*

The maximum number of points given was 12. In addition to the University of Florida, only the University of Minnesota scored 12 points. When some information was unclear (such as agriculture), a half-point was allowed. Five universities scored 10 points or higher and additional effort was directed towards securing a response from these universities (since they were viewed as "most comparable").

Universities with membership in the SUG-25 Data Consortium were automatically included in this study.

* No specific accreditation is given for agriculture, so other sources of information were also employed to determine universities with agriculture schools or colleges.

APPENDIX B

1979-80 STUDENT FINANCIAL AID ADMINISTRATION QUESTIONNAIRE

PAGE 1 of 2

I. BASIC INFORMATION

INSTITUTION NAME: _____ FALL 1979 ENROLLMENT _____

Throughout this questionnaire, the abbreviation "SFAA" refers to the entire function of Student Financial Aid Administration and not to only one specific office. If exact numerical values are not readily available, please use your best estimate.

1. What is your university-wide fee structure? (check one)
 Flat fee for full-time students _____ (e.g. \$250/quarter for full-time)
 Payment for each credit hour taken _____ (e.g. \$17/credit hour/quarter)
2. What percentage of your fall 1979 enrollment was full-time? _____ %
3. How many individual programs (i.e., BEOG, CWSP, SEOG) are administered at your university? _____ (please list on a separate page).
4. What is your total aid application period? from _____ (month) to _____ (month).

II. STAFFING

5. In terms of full-time equivalent staff assigned to all SFAA functions, approximately what percentage are:

Administrators _____ %	Counselors _____ %
Data Processors _____ %	Clerical _____ %
Other (Student) _____ %	Other (Non-student) _____ %
6. What is the total number of staff contacts with students for the 1979-80 academic year? (including receptionists, counselors, etc.) _____
7. What percentage of financial aid applicants:
 Talk with a financial aid counselor? _____ %
 Talk with other (non-counselor) staff? _____ %

III. WORKLOAD MEASURES

8. How many individual financial aid awards were made for the 1979-80 year?
 (sum of individual awards for all students) _____
9. How many BEOG validations were performed for 1979-80? _____
10. Are financial aid awards made for the entire year or by academic term?
 Entire year _____ Academic Term _____
11. Are financial aid awards open for revision during the academic year at the request of the student? yes _____ no _____
 If yes, average number of revisions per student per year: _____
12. What is the average length of time from a completed application being received until the student is notified that the financial aid award package is ready? _____
13. Does your university execute a fee deferment document or procedure when financial aid is pending but not yet available? yes _____ no _____

IV. MONETARY SUPPORT

14. Total University Education and General Budget for 1979-80: \$ _____
15. Estimate of total dollars spent on computing for SFAA in 1979-80 is:
 \$ _____
16. In your perception, the level of funding for SFAA functions provides a "level of service" for the student which is: (check one)

Unsatisfactory	Below Satisfactory	Satisfactory	Above Satisfactory	Excellent
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please return to: University of Florida, Division of Planning and Analysis
 355 Tigert Hall, Gainesville, Florida 32611 (phone (904) 392-1256)

APPENDIX B

1979-80 STUDENT FINANCIAL AID ADMINISTRATION QUESTIONNAIRE

IV. TABULAR DATA

In the following section, please list the number of equivalent full-time staff positions, plus student and graduate assistant positions, which are directly related to the administration of student financial aid and funded through state and non-state funds. Please specify the offices receiving partial funding from non-state funds. Exclude computing costs from each office but include those costs under "Computing Services".

STATE FUNDS

Office	Equivalent Full-Time Positions	Student or Graduate Assistants	Total Estimated Administrative Expenditures for 1979-80 (incl. salaries & operating expenses).
Student Financial Aid	_____	_____	\$ _____
Office of the Registrar	_____	_____	\$ _____
Computing Services	_____	_____	\$ _____
Student Employment	_____	_____	\$ _____
Finance & Accounting	_____	_____	\$ _____
Other Offices	_____	_____	\$ _____

NON-STATE FUNDS

Office	Equivalent Full-Time Positions	Student or Graduate Assistants	Total Estimated Administrative Expenditures for 1979-80 (incl. salaries & operating expenses).
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____

For each financial aid program or group of programs administered by your university, please list the number of applicants and number of recipients and total dollars disbursed.

Number of Applicants	Number of Recipients	Total Dollars Disbursed	
_____	_____	\$ _____	Basic Educational Opportunity Grant (BEOG)
_____	_____	\$ _____	Supplemental Educ. Opportunity Grant (SEOG)
_____	_____	\$ _____	National Direct Student Loan (NDSL)
_____	_____	\$ _____	College Work-Study Program (CWSP)
_____	_____	\$ _____	Guaranteed Federal Loan Programs (GSL, FISL, HEAL)
_____	_____	\$ _____	All Other Federal Programs
_____	_____	\$ _____	State Grants & SSIG
_____	_____	\$ _____	Student Employment other than CWSP
_____	_____	\$ _____	Institutional Grants, Awards, Loans
_____	_____	\$ _____	All Other Programs (excluding graduate assistantships & fellowships)

please return completed forms to: University of Florida
Division of Planning & Analysis
355 Tigert Hall
Gainesville, Florida 32611
phone (904) 392-1256

APPENDIX C

UNIVERSITY OF FLORIDA GAINESVILLE, FLORIDA 32611

DIVISION OF PLANNING AND ANALYSIS

For the past three years, we at the University of Florida have experienced abrupt increases in the workload of Student Financial Aid. These increases are straining our internal allocation of resources. We are seeking your help in determining how we might effectively deal with this problem. Our objective is to identify an appropriate level of funding for the administration of this important function. We are committed to providing an appropriate level of administrative support for this function; moreover, we need information about your programs to help determine that level of support.

By way of the attached questionnaire, we are asking that you provide us with information about your financial aid offices, programs and procedures. With your permission, the results of our analyses will be shared with each participating institution as well as with the National Association of Student Financial Aid Administrators. Since some of the information requested in the attached questionnaire may not be readily available through any one single university office, we are asking for a cooperative effort among the Office of Institutional Research, the Office of Student Financial Aid, the University Comptroller and other appropriate offices on your campus. We are particularly interested in obtaining data on total university financial commitment in staff dollars to the entire financial aid function.

Student Financial Aid Administration is an area which has not been widely researched. If you know of any similar research in this area, please note it on the questionnaire so we can follow it up for inclusion in our study. If you have any questions, please call Mr. Dallas Fox or Mr. Wayne Bottomley at (904) 392-1256 in the Division of Planning and Analysis, or Mr. Doug Turner at (904) 392-1271 in the Office of Student Financial Aid.

We need and appreciate your help with this important study. Thank you!

Sincerely yours,

Mr. Dallas Fox
Associate Director
Planning and Analysis

Mr. Doug Turner
Director
Student Financial Aid

EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

APPENDIX C

UNIVERSITY OF FLORIDA PROPOSED ANALYSIS STUDENT FINANCIAL AID QUESTIONNAIRE DATA June, 1980

I. Approach

The Student Financial Aid (SFA) function responsibilities are split among the following offices on the University of Florida campus:

1. The Office of Student Financial Aid
2. Finance and Accounting - Student Accounts
3. Student Registration and Records, and
4. Administrative Computing Services.

Other universities being sampled will have different assignments of responsibilities among organizations. With various assigned responsibilities among sampled universities, we will observe variations in budget and staff statistics by organization within each institution. This presents a significant problem in preparing staffing and financial estimates by organization. To avoid this problem, we have collapsed all SFA responsibilities into a single "function". The thrust of the resulting questionnaire is toward gathering information about the total SFA function.

A second problem arises when making observations about the level of service provided to students, lending institutions, and the University. This is a very difficult area to quantify even though it is one of the most important underlying reasons for variations in organizational structure and funding level. This problem is treated superficially in this survey by questions 4, 12, and 16 as well as pointing out that statistics concerning the average SFA administrative dollars per student applicant will have a distribution. Variations in level of service among universities will be a part of the reason for this distribution.

II. Statistical Analysis

The survey results will be used in estimating parameters for the following two generalized relationships using the linear regression techniques. Various unitizing techniques will be performed on the dependent variables. The following are examples:

- A. Estimate the average SFA administrative cost per student (applicants, recipients, and fall enrolled students). Variations in these dependent variables will be attempted to be explained by the variations in the following independent variables:

APPENDIX C

1. Number of SFA programs
2. Number of full time students
3. E & G Operating Budget level
4. Number of BEOG validations performed
5. Total number of staff
6. Number of staff-student contacts
7. Number of financial aid awards
8. Number of academic programs
9. Type of fee structure
10. Months of processing time to make award

Additional statistical values will be calculated showing averages as well as making other comparisons. The following is a partial list of such comparisons.

1. Average SFA computing cost per student (applicant/recipient)
2. Average FTE staff positions per million dollars aid awarded.
3. Fraction of the E & G budget used to administer SFA.
4. Average SFA award per student.

III. Uses of Analysis

Empirical results of the above statistical treatment of the data will provide averages for comparison with current University of Florida funding levels. Comparisons with sample averages will indicate internal funding differences (positive and negative) from the sample means for the SFA function in total.

Long range financial (state and non-state) statements of need can be justified with this type of information. Modest internal shifts of resources may be suggested on the basis of this information. However, specific areas of the SFA function could receive resource adjustments only on the basis of additional internal workload analysis and needs assessment.

Aggregate analysis without institution identity will be shared with participating institutions as well as the National Association of Student Financial Aid Administrators.

IV. Future Research

As noted in section I a significant area has been avoided with this research effort. Namely that of identifying levels of service performed by the resources provided. A future survey might be designed to capture information in this area as well as other areas as time permits.

UNIVERSITY OF FLORIDA
DIVISION OF PLANNING AND ANALYSTS
STUDENT FINANCIAL AID SURVEY
DESCRIPTIVE STATISTICS

VARIABLE	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD. ERROR OF MEAN	C.V.	COMP VALUE
ENROLLMENT	21	25325.	10513.2	11374.	54600.0	2294.17	41.51	----
FTE STUDENT	21	20950.	9260.0	0054.	41769.0	2022.44	44.22	----
ESG BUDGET 1978	21	135036704.	70671216.0	34773438.	266094080.	15421725.0	52.34	----
OPER EXPENDITURE	21	658524.	525025.2	191345.	1849287.0	114262.01	80.00	----
SFA OFFICE EXPENDITURE	21	402007.	294022.2	80000.	1157387.0	64160.92	73.14	----
OPER FTE STAFF	21	42.	27.2	14.	103.3	5.94	64.97	----
SFA OFFICE FTE STAFF	21	20.	15.8	4.	64.1	3.45	60.39	----
TOT STAFF CONTACTS/YEAR	21	69241.	60078.2	10000.	232809.0	13114.51	86.00	----
NJM AWARDS/YEAR	21	22043.	26947.0	3606.	119740.0	5880.32	122.25	----
NJMCH OF PROGMS	19	44.	99.9	0.	450.0	22.92	224.09	----
BEOG VALIDATIONS/YEAR	21	707.	904.6	150.	4688.0	210.49	136.43	----
APPLICANTS-BEOG	21	7372.	4879.6	3125.	21874.0	1064.01	66.19	----
APPLICANTS-SEOG	20	5921.	5642.2	0.	21874.0	1261.64	95.30	----
APPLICANTS-MOSL	20	7116.	4972.0	205.	21074.0	1111.78	69.07	----
APPLICANTS-CWSP	20	6016.	5019.1	0.	21874.0	1122.29	83.42	----
APPLICANT-GUAR FED LOAN	20	5035.	3724.7	930.	13000.0	721.07	63.41	----
APPLICANTS-OTHER FED	20	2766.	5605.2	0.	21874.0	1271.24	205.53	----
APPLICANTS-STATE GRANTS-SSIO	17	5411.	5364.4	0.	21874.0	1301.07	99.15	----
APPLCHT-STD EMPLOYMENT CWSP	16	5492.	5841.5	0.	19000.0	1460.38	99.14	----
APPLCHT-INST AWARDS GRNTS ETC	17	0737.	9964.8	0.	35000.0	2410.42	114.06	----

UNIVERSITY OF FLORIDA
DIVISION OF PLANNING AND ANALYSIS
STUDENT FINANCIAL AID SURVEY
DESCRIPTIVE STATISTICS

VARIABLE	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	C.V.	COMP VALUE
APPLICANTS-ALL OTHER PROGRS	18	1532.	2371.9	0.	7500.0	559.06	154.81	----
APPLICANT TOTALS	16	41978.	27034.1	2954.	92734.0	6758.54	64.40	----
RECIPIENTS-SEOG	21	4483.	1965.2	2000.	10670.0	426.85	43.83	----
RECIPIENTS-SEOG	21	806.	608.5	0.	2287.0	132.78	75.50	----
RECIPIENTS-NDSL	21	1799.	1109.2	153.	4710.0	242.05	61.65	----
RECIPIENTS-CWSP	21	1432.	863.0	190.	2700.0	175.23	56.06	----
RECIPIENTS-GUAR FED LOAN	21	4565.	3022.2	827.	12000.0	659.49	66.21	----
RECIPIENTS-OTHER FED PROGRS	21	244.	381.9	0.	1734.0	83.34	156.43	----
RECIPIENTS-STATE GRANTS/SSIG	21	1966.	2040.6	118.	7261.0	445.30	103.80	----
RECIP-STD EMP (NOT CWSP)	21	3024.	3714.1	0.	13980.0	810.49	122.82	----
RECIPIENTS-INST AWDOS ETC	21	2995.	3406.5	0.	11494.0	743.36	113.73	----
RECIPIENTS-ALL OTHER PROGRS	20	916.	1428.5	0.	5645.0	319.42	157.62	----
RECIPIENTS-TOTALS	21	21661.	12834.3	6636.	50215.0	2800.67	59.25	----
DISBURSAL FUNDS-SEOG	21	4009053.	1746593.0	1086560.	9632791.0	301137.81	43.57	----
DISBURS FUNDS-SEOG	21	462900.	381738.4	0.	1345000.0	83302.25	82.47	----
DISBURS FUNDS-NDSL	21	1022608.	1001931.1	149448.	4227393.0	218639.31	61.75	----
DISBURS FUNDS-CWSP	21	1144001.	774001.8	198247.	3000000.0	168701.06	64.82	----
DISBURS FUNDS-GUAR FED LOAN	21	8954041.	5648905.0	2151715.	25305136.0	1237679.00	63.31	----
DISBURS FUNDS-OTHER FED	20	533403.	1535009.0	22000.	6835045.0	336543.62	202.16	----
DISBURS FUNDS STATE GRNTS	21	1148179.	1287935.0	104900.	4332217.0	291650.44	112.17	----

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UNIVERSITY OF FLORIDA
DIVISION OF PLANNING AND ANALYSIS
STUDENT FINANCIAL AID SURVEY
DESCRIPTIVE STATISTICS

VARIABLE	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	C.V.	COMP VALUE
DISBURS STD EMP (NOT CWSP)	20	4638234.	6646472.0	0.	25000000.0	1486196.00	143.30	----
DISBURS FUNDS-INST AWARDS ETC	21	2172663.	2280350.0	0.	12598415.0	650365.75	137.18	----
DISBURS FUNDS-ALL OTHER	21	611102.	801507.2	0.	2512642.0	174903.19	131.16	----
DISBURS TOTALS	21	25098590.	19676452.0	6437472.	63681440.0	3639106.00	66.44	----
SFA OFF EXPEN/RECIPIENT	21	19.	9.0	3.	44.2	1.97	46.63	----
SFA OPER EXPEN/RECIPIENT	21	39.	14.6	11.	64.2	3.18	48.23	----
SFA OFF EXPEN/ENROLLED STD	21	15.	8.2	4.	39.9	1.78	53.20	----
SFA OPER EXPEN/ENROLLED STD	21	25.	14.2	7.	63.8	3.10	57.41	----
SFA OFF EXPEN/100000 BUD	21	302.	132.4	78.	571.2	28.90	43.06	----
SFA OPER EXPEN/100000 BUD	21	491.	246.2	130.	915.0	53.72	50.15	----
SFA OFF EXPEN/FTE	21	18.	8.2	4.	39.9	1.80	44.61	----
OPER EXPEN/FTE	21	30.	14.3	9.	63.8	3.13	48.61	----
OFF EMP/1000 ENROLLED STD	21	1.	0.5	0.	2.2	0.11	48.16	----
OPER EMP/1000 ENROLLED STD	21	2.	0.8	1.	3.8	0.18	50.92	----
SFA OFF STAFF/1 MILL DISBURS	21	1.	0.6	0.	2.6	0.12	47.61	----
SFA OPER STAFF/1 MILL DISBURS	21	2.	0.9	1.	3.8	0.19	46.95	----
SFA OFF /1000 ENROLLED STD	21	1.	0.5	0.	2.2	0.11	48.16	----
SFA OPER/1000 ENROLLED STD	21	2.	0.8	1.	3.8	0.18	50.92	----
RECIPIENTS/100 ENROLLED STD	21	86.	32.3	24.	138.7	7.05	37.67	----
RECIPIENTS/100 FTE STD	21	104.	31.6	27.	154.1	7.33	32.31	----

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UNIVERSITY OF FLORIDA
DIVISION OF PLANNING AND ANALYSIS
STUDENT FINANCIAL AID SURVEY
DESCRIPTIVE STATISTICS

VARIABLE	N	MEAN	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE	STD ERROR OF MEAN	C.V.	COMP VALUE
DISBURS/ENROLLED STD	21	970.	406.0	317.	1852.5	83.60	41.86	----
DISBURS/APPLICANT	16	615.	216.5	326.	1196.7	54.13	35.23	----
DISBURS/RECIPIENT	21	1137.	189.0	809.	1509.1	41.24	16.62	----
OFF EMP/10000 EXPEN	21	1.	0.1	0.	0.9	0.03	19.11	----
OPER EMP/10000 EXPEN	21	1.	0.2	0.	1.1	0.04	22.67	----

TABLE II

Correlation Matrix of Staff and Expenditure
Independent Variables (N=21)

	Office Staff	Office Expend.	Activity Staff	Activity Expenditure	Type of Variable
Headcount Enrollment	0.67	0.70	0.62	0.68	Scale
FTE Enrollment	0.73	0.77	0.70	0.76	Scale
TOTAL Programs	-0.13	-0.05	-0.12	-0.05	Scale
TOTAL Awards	0.48	0.56	0.62	0.60	Workload
Average Number of Revisions	0.18	0.06	0.06	-0.04	Workload
TOTAL Staff-Student Contracts	0.53	0.60	0.66	0.71	Workload
TOTAL BEOG Validations	0.12	0.13	0.17	0.16	Workload
TOTAL BEOG Applicants	0.80	0.85	0.77	0.78	Workload

TABLE III-A

Staff Models

$$\begin{aligned}\underline{\text{OFFICE STAFF}} &= 4.339269 + 0.002278653 \text{ BEOG Applicants} \\ &\quad (1.0878) \quad (4.9846) \\ &+ 0.00007448308 \text{ TOTAL Staff-Student Contacts} \\ &\quad (2.0209)\end{aligned}$$

BETA COEFFICIENTS

Total Staff-Student Contacts	0.28327498
BEOG Applicants	0.69869436

$$R^2 = 0.71$$

$$\begin{aligned}\underline{\text{ACTIVITY STAFF}} &= 2.700411 + 0.0001987635 \text{ TOTAL Staff-Student Contacts} \\ &\quad (0.4746) \quad (3.7808) \\ &+ 0.003576339 \text{ BEOG Applicants} \\ &\quad (5.4846)\end{aligned}$$

BETA COEFFICIENTS

Total Staff-Student Contacts	0.44011530
BEOG Applicants	0.63845015

$$R^2 = 0.80$$

TABLE III-B

Expenditure Models

OFFICE EXPENDITURE = -75,667 + 14,060.92205976 Office Staff*

(-2.28) (7.89)

+15.50515332 BEOG Applicants

(2.67)

BETA COEFFICIENTS

Office Staff 0.75525560

BEOG Applicants 0.25536725

$R^2 = 0.94$

Activity Expenditure = -108,503 + 18,253.31409079 Activity Staff*

(-1.40) (11.91)

BETA COEFFICIENT

Activity Staff 0.94198784

$R^2 = 0.90$

*Actual observed values

TABLE III-C

Simultaneous Expenditure Models*

$$\underline{\text{OFFICE EXPENDITURE}} = -124,962 + 20,267.71 \text{ Office Staff estimate*}$$

(-2.6281) (12.4553)

BETA COEFFICIENT

Office Staff estimate 0.91524106

$R^2 = 0.90$

$$\underline{\text{ACTIVITY EXPENDITURE}} = -177,089 + 19,869 \text{ Activity Staff estimate**}$$

(-2.0487) (11.2350)

BETA COEFFICIENT

Activity Staff estimate 0.91585018

*Estimates based on 2-stage least square model

**Estimates based on predicted values of staff models shown in Table III-A

TABLE III-D

Expenditure Models*

Office Expenditure = 140,439 + 1.48898727 Total Staff-Student Contacts

(-2.24) (3.31)•

+ 9.20896694 FTE Enrollment + 33.97024636 BEOG

(2.53)

(4.87)

Applicants

BETA COEFFICIENTS

Total Staff-Student Contacts 0.30417375

FTE Enrollment 0.29025810

BEOG Applicants 0.55948422

R² = 0.88

Activity Expenditure = -324,024 +3.90471784 Total Staff-Student Contacts

(-3.07) (5.15)

+ 18.32412342 FTE Enrollment + 46.07176344 BEOG

(2.98) (3.92)

Applicants

BETA COEFFICIENTS

Total Staff-Student Contacts 0.45207768

FTE Enrollment 0.33775810

BEOG Applicants 0.40202012

R² = 0.90

*Avoids using staffing measures as independent variables